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# ANNUAL REPORT

OF THE

# FIRE MARSHAL

TO THE

MAYOR OF PHILADELPHIA.

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PHILADELPHIA :

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# REPORT OF THE FIRE MARSHAL.

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FIRE MARSHAL'S OFFICE,

S. W. Corner Fifth and Chestnut Streets,

*Philadelphia, January 25, 1865.*

HON. ALEXANDER HENRY, MAYOR :

SIR:—Since my last Annual Report, the office of Fire Marshal, in accordance with your recommendation, has been recognized by the City Councils, and a more adequate salary attached to the situation. For the prompt, kind and complimentary manner in which the desirable change was effected, my most grateful acknowledgments are due to you, as well as to the gentlemen composing the two legislative branches of the municipal government. With your approval, the State Legislature, at its last session, by an unanimous vote of both houses, also clothed the office with all the powers deemed essential, at present, for its efficient working. For this additional evidence of confidence, I feel under obligations which I have no words to express. The character and moral influence given to the position by its official recognition, will render its future operations much more favorable and satisfactory. As in the past, it has been my humble endeavor to discharge its responsible duties with fidelity and integrity, so hereafter shall no effort of mine be spared to prove myself worthy of the trust reposed in me.

The memory of the oldest chronicler of fires, runs back to no period in the history of such events, when they were so frequent, as well as so destructive as during the year 1864. In both the old and new world, the fire-fiend held a demoniac carnival, reveling in conflagrations and explosions. Abroad,

whole towns were swept away, and miles of forest and heath laid waste. At home, entire villages have fallen a prey to the devouring element, and mountain and prairie consumed like chaff. In far-off Russia, social fermentation has lighted the incendiary torch, and instigated fearful gun-powder plots, rendering thousands of villagers shelterless, and spreading the most intense alarm throughout numerous provinces. In our own once happy country, the track of invading armies has been marked by fiery desolation, and rebel conspirators have essayed, in the darkness of midnight, to wrap in flames the commercial emporium of the Union.

In America, the occurrence of fires, last year, was of remarkable frequency, and many of the conflagrations were unusually disastrous. The losses were enormous and entirely unprecedented. From statistics collected from the most reliable records, the total loss by burning in the United States, is estimated at not less than \$50,000,000. In the Northern States alone, during the month of July, which was memorable for ravages by fire everywhere, property was consumed to the amount of upwards of \$5,000,000, much of which comprised the most important government works and store-houses, together with valuable private manufacturing and business establishments.

These deplorable calamities are clearly attributable to two causes. First, the demoralized condition of society, growing out of the sad war that unhappily afflicts the land, engendered a spirit of diabolical incendiarism which, in a number of localities, accomplished an immense amount of mischief. Second, a severe and long protracted summer drought. For sixty days, between the latter part of May and latter part of July, there fell only two inches and a-half of rain, while the rays of the sun were intensely hot, and there was a constant prevalence of westerly winds. Everything combustible, by this extreme aridity of the atmosphere, reached so high a degree of inflammability, that the slightest spark sufficed to kindle a fire that was sure to spread with the rapidity of lightning and the fury of the whirlwind.

Our City, during the greater part of the past year, was favored with a gratifying exemption from fires; still, she had her share of conflagrations, several of which were larger and more ruinous than any that had taken place for a number of years. The greatest destruction occurred in midsummer, at

the time of the dry and sultry weather which continued for so many weeks.

The total number of fires in the metropolis, from January 1, to December 31, 1864, was 394; of which 346 were of accidental, 45 of incendiary, and 3 of unknown origin. 78 of the whole number happened in the month of July. Four of the incendiary fires were caused by lunatics, and more than one-half of them were made by thoughtless, mischievous and reckless juveniles. The following were ascertained to be the causes of the fires which were the result of accident, viz: Sparks on shingle roofs, 43; carelessness, 34; fireworks, 30; children playing with matches, 29; lights, 27; stoves, 23; furnaces, 18; spontaneous combustion, 17; defective flues, 16; foul chimneys, 13; smoking, 9; gas explosions, 8; sparks from burning buildings, 7; drying apparatus, 6; heat of steam boilers, 6; hot ashes, 6; sparks from steam fire engines, 5; bonfires, 5; lightning, 5; friction of machinery, 4; drunkards, 4; explosion of steam boilers, 4; hot roasted coffee, 3; reckless construction, 3; stills, 3; burglars, 3; sparks from locomotives, 2; bursting of vitriol carboys, 2; ovens, 2; cigar stumps in wooden spittoons filled with saw-dust, 2; kilns, 2; mice, 2; vagrants, 2; steam-pipe, 1.

The aggregate losses and insurances foot up as follows:

Estimated loss,	-	-	-	\$999,249 00
Insurance,	-	-	-	546,277 00
Loss over insurance,	-	-	-	<u>\$452,972 00</u>

Nearly half of the total loss for the year was in July.

In New York, the loss for the single month of January, 1864, exceeded \$1,000,000, and in December was \$817,525. In escaping such absolutely appalling losses as these, the people of Philadelphia certainly have much reason for congratulation; and especially have they cause for heart-felt and prayerful gratitude to Him who holds all that's human in the hollow of His hand, for having so mercifully shielded and preserved them from the horrors of the dark and wicked scenes that were attempted to be enacted at the hotels and places of amusement in the City of New York, in the month of November, by the dastardly spies and cruel agents of the

foul conspiracy which has so insiduously plotted and desperately struggled for the annihilation of our proud Nationality.

The principal fires of the year, were the burning of the drug mill of Thomas & Co., in New Market street near Germantown avenue, on the morning of the 14th of January; the candle works of Grant & Co., corner of Twenty-third and Hamilton streets, on the afternoon of the 20th of April; the coal oil distillery of Crew & Brother, corner of Twenty-third and Arch streets, on the 19th of May; Nixon's paper mill, Manayunk, Twenty-first Ward, on the evening of the 20th of July; Simons' wagon works, Second and Cumberland streets, on the evening of the 22d of the same month; Solms' mill, Manayunk, on the morning of the 29th of September; and the Kerosene oil refinery of Carr & O'Neill, corner of Twenty-second and Washington streets, on the evening of the 19th of December.

These fires swallowed up property to the value of \$600,000, or nearly two-thirds of the whole annual loss. A quarter of a million of this sum, was lost by the demolition of the U. S. National Wagon Works—an establishment which, with its spacious buildings, extensive machinery and immense piles of valuable lumber, covered an area of five acres. The burning of this mammoth manufactory, was one of the fiercest and most terrific conflagrations ever beheld—the spectacle it presented being at once grand and awful.

It affords me no little satisfaction to report that not one of these seven conflagrations, which involved such heavy losses, was the work of design. The popular idea, indeed, the almost universal impression, at the time of the disaster, was, that Mr. Simons' factory was set on fire, and there was a very general belief that the incendiaries were rebels, secreted amongst us, in the guise of loyalty. Rumors were current that fires which had been kindled in several different places, burst forth simultaneously, thus insuring the speedy demolition of the establishment. These reports were circulated all over the City, and stories of emissaries from rebeldom, leagued together to burn down every government manufactory and depot in Philadelphia, were on thousands of lips, and were daily repeated from one person to another. The evidence elicited in my investigation, however, showed that this lamentable conflagration was the consequence of carelessness. The fire originated directly in front of one of the furnaces.



among some light fuel, and might have been extinguished in its incipient state, had those who first discovered it been cool, prompt and energetic. But owing to the absence of presence of mind and the lack of decision and nerve, the flames were suffered to remain unchecked, until it was too late to control their progress. Creeping imperceptibly from the furnace-room, through crevices and along the dry and dust-covered timbers, the next portion of the works they assailed was a huge tinder-box in the shape of a shed 200 by 120 feet, in which sawing and various other operations were carried on. This structure was closely filled with material of the most inflammable kind, and the fire shooting through it with electric speed, on its desolating career, devoured it with fearful rapacity. The intensity of the heat thus suddenly generated, quickly ignited everything perishable on the premises, and in a few hours this once vast bee-hive of American enterprize and industry, was reduced to heaps of smouldering debris. The most herculean efforts of hosts of stalwart and danger-defying firemen who formed a cordon of powerful streams from a score or more of steamers, around the blazing works, were futile to save them. All that could be done, was to preserve the adjacent properties. A few months before the sad mishap, these works had a narrow escape from a similar fate. One evening, fire was detected by the night watchman, in a collection of refuse, on the identical spot where the fatal one began, when he fortunately called to his assistance a cool-headed and resolute gentleman, by whose judicious management and untiring exertions, it was subdued. Mr. Simons had never heard of this fire until informed by the Fire Marshal that his inquiries had disclosed the fact.

The other destructive fires of the year were the burning of G. W. Wootten's coal oil lamp store, in Second street, above Chestnut, on the afternoon of the 15th of February; the coopering establishment of John S. Curby, and adjoining buildings, on Penn and Larkin streets, on the morning of the 18th of the same month; Pettit's mill, corner of Ninth and Wallace streets, on the morning of the 27th of March; Carr's umbrella frame manufactory, corner of Twelfth and Willow streets, on the afternoon of the 24th of May; the Summerl block of stores, Water street, above Arch, on the morning of the 2d of June; Reeves' bedstead factory, St. John street, above Willow, on the morning of the 1st of July; Flack's

fruit preserving vaults, Landing avenue, on the morning of the 5th of the same month; Brown's shoddy mill, Moore street, near Second, on the afternoon of the 4th of September; Williams' venetian blind manufactory, and adjoining establishments, Sixth street, above Market, on the morning of the 20th of November.

The fire at Wootten's oil store was an extraordinary case. When it began, Wootten himself was the only person in the place. His explanation of the mishap was this: He wanted to remove some old lumber that had been used as skids from the rear of the cellar to one of the upper stories, and the hatches were opened for the purpose. The pieces of timber were placed in the hatchway, between the basement and first floor, preparatory to being passed up. The back part of the cellar was dark and badly ventilated. The floor was saturated with crude petroleum, which had leaked from barrels stored there, and the vapors arising from this oil pervaded the air of the apartment. Aware of the danger of taking an ordinary light into such an atmosphere, he used a lamp, the invention of a New York manufacturer, which he had been induced to believe equal in safety to the miner's lantern, but he was deceived in it. This lamp had been left burning in the basement for half an hour, when he was suddenly startled by a loud explosion, saw a blaze ascending through the open hatch, and instantly found himself enveloped in flame. Fleeing from the counting-room, he barely escaped with his life.

Wootten had been speculating in coal oil, and failed to meet his obligations. After the fire, when his creditors pressed him, he told them that, in his hurried flight from the store, at the time of the accident, he was compelled to leave in one of the drawers of his desk, bank notes in packages, amounting to the sum of \$10,000, and that this money, which he had intended to deposit that very day to meet matured promises, was either burned or stolen. The fire broke out at precisely three minutes before three o'clock, P. M., the hour at which the banks close. The building he occupied, extended the whole depth from Second to Strawberry street. The first floor was divided by a wall into two stores: one, Wootten's, fronting on Second street, and the other, a paper dealer's, on Strawberry street. There was no fire in the latter store, and at an early stage of the conflagration, the members of the Good Intent Hose Company broke through the partition,



and driving the flames before them with the force of their streams, entered Wootten's counting-room, and playing on his desk, which was in a blaze, put out the fire, and then examined the drawers, which were found to contain nothing of value. Previously to this time, no human being could have reached the desk, or in any manner tampered with it. When I heard of the story, I immediately went to the store, and searching among the ruins, discovered the wreck of the desk, which I carefully inspected, when it proved to be scorched and charred on the outside, but the interior of the drawers was intact. No vestige of the bills alleged to have been lost was ever discovered. The firemen referred to were members of the Department, whose reputations for truth and honesty are above suspicion. While the fire was going on, Wootten was on the ground all the time, yet he never intimated to the Fire Marshal, or any policeman or fireman, that he had left so large a sum in his desk. When the fire had been subdued, in detailing his account of it to me, he never even hinted at the loss which he afterwards declared he had sustained. He subsequently compromised with his creditors. His insurance money was paid to them. It was the second fire he had had in the same store. He never resumed business there again.

The number of arrests for the year, on the charges of arson, attempted arson, and suspicion of arson, was forty-seven. Among the convictions in the Criminal Court were the cases of two female domestics, one white and the other colored, who robbed the houses where they were employed and then set fire to them to destroy the evidence of their guilt. There was only one clearly ascertained incendiary fire, perpetrated for the purpose of defrauding underwriters. The moral effect of the wholesome examples made of this class of offenders by the vigilance and perseverance of the fire detective branch of the police, has exceeded my most sanguine expectations.

A remarkable case of incendiarism, came under my notice in the month of August. A half-witted girl, living with a truck-grower in the First Ward, set fire to the farm-house, which was luckily saved. The next day, she fired the barn which was reduced to ashes. On each occasion, the farmer was working in the field, and his wife was vending vegetables in the market. The young culprit induced them both to believe that the incendiary was a mysterious stranger of whom she pretended to give an accurate description. The wife

straightway hastened to a fortune-teller, who told her the girl's story was true, and that the unknown barn-burner was a rebel! The planet-reader, playing upon the credulity of the simple-minded woman, went further. She alarmed her by telling her that the rebel intended to return again and burn down every building on the place. But afterwards, to quiet her fears, assured her that she could put a spell on this inveterate enemy, which would prevent him from doing any more mischief there. The charm, of course, was to cost a stipulated sum, and the time was fixed for the credulous truck-vender to call and pay the fee! An examination dispelled the illusion, by bringing the real truth to light. The juvenile pyromaniae was placed under proper restraint. I have often known fortune-tellers to interfere with the detective operations of the police, in cases of robbery, but this was the first instance in which one of these impostors ever crossed the official path of the Fire Marshal.

Last winter, a party of colored burglars entered and robbed a number of dwellings in the southern, southwestern and northern sections of the City. A peculiarity of their operations was the burning out of the fastenings of doors to obtain entrance. The ring-leader of the gang was finally arrested, and sent to the penitentiary for six years. Since then, no such burglarious depredation has come to my knowledge.

The City, last year, was infested with several gangs of safe-blowers, and three of the places that were the scenes of the operations of these burglars, an iron store, a produce depot, and an office, were fired by the explosions, and were only saved by the vigilance of the police and the promptness of the firemen. The detective officers arrested nine of the offenders, and five of them were at length convicted.

Fires from sparks on shingle roofs were unusually numerous, particularly in the warm season. The cause was readily ascertained. The high price of fuel necessitated hundreds of poor people to gather from work-shops, lumber-yards, ship-houses, new buildings, wrecks of old or burnt properties, and wherever else the stuff was to be had, all kinds of refuse materials, such as shavings, chips, wood-cuttings, decayed lumber, &c., and this trash was substituted altogether for coals, coke and cordwood, to boil the tea-kettle or cook a hurried meal. In the summer months, nearly all these fires happened about the hour of either breakfast, dinner or supper.

Defective and dirty chimneys likewise swelled the list of roof fires. In Philadelphia, chimney sweeping has well nigh become a thing of the past. As to defects in the flues, arising from faulty masonry and other causes, they are so common that it is really surprising to me that scores of houses are not burnt, where one takes fire. There is hardly a square of dwellings in the city, excepting blocks of recent erection, in which cannot be discovered some chimney in an unsafe condition. Let any one station himself upon a house-top, and cast his eyes around. In whatever direction he looks, he will see stacks partially or completely honey-combed from the action of the coal gases and elements on the cement, and the bricks toppling, so as to put in constant jeopardy, especially in windy weather, the lives and limbs of pedestrians passing along the streets. The nuisance is daily complained of to the Fire Marshal. Unless to remonstrate and appeal, he is powerless. There is no law to apply as a remedy. He finds house-holders heedless and indifferent, and too many landlords mean and unreasonable. Some of the latter manifest an utter disregard of the welfare of their tenants. With ample insurance policies in their secretaries, it matters but little to them whether the roofs and lofts of their houses burn or not, and far less are they concerned about the misfortunes of the uninsured occupants whose effects are ruined or damaged. Public safety demands that some measure should be adopted by our lawmakers to correct the evil. The subject is worthy of the serious attention of Councils and the Legislature. A stringent statute or ordinance, compelling owners of houses to keep the chimneys clean and safe, would insure the needed protection to life and property, and annually save to underwriters and housekeepers thousands of dollars. And to enforce the provisions of such a law, there ought, in my opinion, to be a chimney inspector appointed.

The increase in the number of cases of spontaneous combustion, is easily explained. The exigencies of the present civil war, have led to the production of shoddy in quantities never before dreamed of, and the quality of most of the rags worked up in the mills, is anything else than choice. Bags of them are not only filthy and greasy, but reeking with disease. Much of the waste, also, now in the market, is foul in the extreme, and often stored when damp. The weather, too, last summer and fall, was peculiarly favorable to the

singular chemical action that causes natural ignition. On the morning of the 27th of June, a fire broke out in the warehouse of Messrs. Henry & Co., rag and waste dealers, north Front street. On the morning of the 11th of August, I was called to investigate another fire in the same store, which had started in the same kind of material and in the identical spot as did that in June. This time the warehouse came very near being destroyed. Again, on the morning of the 6th of September, there was another fire in the same premises. Strange as it may appear, all three of these fires developed themselves about the same time,—the first at 4.43, the second at 4.23, and the third at 4.16, A. M. The atmosphere on all three occasions, was extremely sultry. There had been other fires in this establishment, which was once, with a heavy and valuable stock, totally demolished. The storage of cotton and woollen waste in warehouses in the compactly built parts of our main business thoroughfares, my experience as a fire detective, satisfies me, is a practise of very doubtful expediency. It would be much safer to deposit this dangerous article in buildings occupying isolated locations.

The number of fires from lucifers in the hands of children, is still large, but it is to be hoped that the advanced rates for these hazardous playthings, may hereafter lead to greater care being taken of them, and that the accidents they so frequently occasion may diminish accordingly.

Examinations into the facts and circumstances attending the fires that are continually breaking out in stables, and now and then roasting alive poor dumb beasts, have claimed a good deal of my time and attention, and, from the testimony obtained, the conclusion I have arrived at is, that in many cases of these mishaps, the harm is not done by incendiaries, as is generally supposed, but by careless men and reckless boys, with matches, pipes, cigars, and open lights. Instead of secure lanterns, which ought always to be carried in stalls and lofts where there is hay and straw, it is no uncommon thing to use kerosene and fluid lamps and tallow candles. A porter bottle, I find, is a convenient substitute for a candlestick, and sometimes the candle is stuck against the wall. A shield over a lamp is deemed an useless precaution. Nothing could be more treacherous than a spark falling into the litter of a stable. Numbers of stablemen drink, and some of them are scarcely ever sober, and these bad habits add to the



chances of accident. When closely questioned by the Fire Marshal, it is amazing how they will lie and deceive, and try to keep back the truth, in order to conceal their carelessness. To check this growing mischief, I would recommend the immediate passage by Councils of an ordinance, making it a penalty of five dollars to take an open light of any kind into a stable or barn.

Next to that strange and mysterious process of nature, chemical action, in the production of fires, the most insidious agent is hot ashes. They will retain heat for weeks, and start combustion at the moment least anticipated. Neither an ash box nor an ash barrel is ever safe an instant on one's premises, especially if placed on a wooden floor, or against a frame wall or board partition. I have been actually amazed in witnessing the carelessness exhibited by people in getting rid of their ashes, and this sometimes too in places, such, for instance, as large storehouses filled with stocks of goods of great value, important manufactories, depots, &c., where I had a right to expect better things of the good sense and forethought of the proprietors, or other persons in charge of them. I am convinced that many of the fires, the commencement of which is wrapped in mystery, come from depositing heated ashes in wooden boxes.

The removal of ashes in this city, has been, for a long while, a vexatious subject. The present mode of removing them is a positive nuisance. The Corporation undertakes the job, but there is no system or regularity about it. Our thoroughfares are rendered unsightly by capsized barrels, boxes and pans, left on the curbstone to await the tardy and uncertain arrival of the municipal carter, and our homes made uncomfortable, should they happen to be undergoing ventilation when the ashman does come.

The whole question, it seems to me, is simple and easily disposed of. No sensible housekeeper, merchant, or mechanic, should ever suffer to be used, either at his home or place of business, any vessel as a temporary receptacle for ashes that was not metallic. The owners of dwellings and other buildings in which fire is required, should be compelled to construct bins of brick, stone, or other incombustible material, in their cellars, for the deposit of ashes which the occupants ought to be obliged to have removed, whenever necessary, at their own expense, and all ash carts employed for the pur-



pose should be covered. This would soon diminish fires, and the abominable arrangements we now have for ridding our residences, counting-houses, and workshops of ashes, would no more annoy us, or mar the beauty and cleanliness of our metropolis.

Another treacherous promoter of combustion, is a cigar stump that has retained fire, thrown into a wooden spittoon containing saw-dust, or allowed to smoulder among the same ignitable material in a stove-box made of boards. I have had some remarkable cases of burning from this cause. If spit-boxes of wood must be used, they should be filled with sand as an absorbent, instead of saw-dust. But when iron and earthen spittoons are so plenty, and can be bought so cheaply, I can see neither wisdom nor economy in having the wooden utensil in any one's place. As for stove-boxes in bar rooms, and other places where there is much smoking, where sand to fill them can be had so readily, there is certainly no excuse for the use of saw-dust.

The building of bonfires, a sport for which children of both sexes seem to have a perfect mania, is fraught with much danger. Some of the most painful and agonizing accidents that ever came under my notice, have resulted from the indulgence in this juvenile passion. Last summer, two frame stables were burned, and other combustible structures damaged by these little fires. They should be discountenanced by everybody, and there ought to be greater vigilance on the part of the police in preventing them.

In dry and windy weather, shingle roofs are very liable to ignition from sparks that issue from the smoke-stacks of the steamers working at fires. Three dwelling houses were badly damaged, and other properties slightly injured last year, in this way. As a preventive, I would suggest the use of a spark-catcher. The skill of Philadelphia engineers, I have no doubt, could invent some contrivance of this sort, that would answer the purpose, without impairing the efficiency of the apparatus.

There were nine steam boiler explosions within the limits of the consolidated city, in 1864, four of which were accompanied by trifling burnings. Two of these explosions,—that at the foundry of Merrick & Son, corner of Fifth and Washington streets, on the 6th of April, and the one at the chandelier manufactory of Cornelius & Baker, in Cherry street,

above Eighth, on the morning of the 25th of the same month, were catastrophes of the most appalling and fatal character. They were investigated by Coroner Taylor,—a public functionary of whom Philadelphia has reason to be proud,—with a thoroughness and fidelity seldom witnessed. The juries were composed of gentlemen whose reputations for integrity and impartiality were unquestionable, and who were well known in the community for their long experience in mechanical pursuits and their scientific knowledge of the generation and forces of steam. With the view of eliciting the truth, the examinations were allowed the widest range, and days were devoted to the hearing of the testimony. The verdicts which were published, no unprejudiced person who read them could fail to be convinced, were learned, logical and conscientious. I assisted the Coroner in selecting the jurors and securing the witnesses, and intently watched the progress of the investigations. After mature consideration of the evidence, my conclusions were these:—In the case of the explosion at Merrick & Son's, there would have been no accident, if, when changing the steam from the new to the old boiler, the machinery had been stopped and the fires withdrawn from the furnaces. A dear and terrible cost was paid for the saving of a few hours time in the work of the day. In the case of the bursting of the boilers at Cornelius & Baker's, the engine-tender was clearly culpable. His tardiness in reaching the factory on the morning of the calamity, obliged him to hurry in getting up steam, and at a most critical moment he absented himself from his post. True, he left another man in the boiler-room to watch the steam, but the latter was totally incompetent, and proved his faithfulness by going into another apartment to see about his breakfast, soon after the engineer's back was turned!

Immediately following these dreadful disasters were alarming developments in relation to the criminal disregard of human life manifested by too many of those having the management and control of the immense steam power in our midst, in keeping in use unsafe boilers, and employing ignorant and careless men and boys as firemen and engine-tenders. This aroused our citizens to the proper realization of the imminent peril to which they were exposed, and there was an urgent demand for the enactment of a law authorizing the appointment of an inspector of stationary steam engines and

boilers, and creating a board of examiners as to the competency of engineers. A law was passed by the Legislature, empowering the Mayor to appoint an inspector of boilers, and charging Councils with the duty of providing an office for him and fixing the rate of his compensation. A suitable appointee was nominated and sent to the Select branch by your Honor, but Councils have not yet taken any further action in this important matter. The provisions of the Act of Assembly are effective enough as far as they go, but it is to be regretted there was not one requiring that all persons employed as engine-tenders should first pass an examination as to their qualifications. I would suggest the passage by the present Legislature of a supplement to the Act, embracing this vital provision, and I would likewise urge that Councils should take immediate steps to have the provisions of the existing act enforced. When, in a densely populated metropolis like ours, the wrecks of steam boilers of the largest dimensions can be blown high into the air, and hurled over housetops for the distance of squares, crashing through houses and killing or maiming the unsuspecting inmates, nothing ought to be left undone by the municipal authorities to prevent the recurrence of such awful casualties.

I discover on my records for the past year, two hundred and eighteen cases of persons who either lost their lives or were injured by fires and explosions. This is truly a frightful list, to swell which, negligence, selfishness and cupidity have each contributed its share. Who can tell the distress and agony occasioned by many of these shocking accidents! A number of the fatal burning cases were innocent children left alone in rooms where there were hot stoves, by thoughtless mothers, who were gossiping at the end of the alley or the corner provision shop.

The incorporation by the last Legislature of the Petroleum Storage Company of Philadelphia, will, I hope, in time, at least diminish, if it does not altogether prevent coal-oil fires. About \$100,000 of the losses in our city, for 1864, were from the ignition of petroleum and benzine, while the total loss by fires kindled by the torch of the incendiary, did not amount to half of that sum.

A late shocking and fatal explosion of fireworks in the Twenty-fourth Ward, impels me once more to appeal to our Legislators to pass a law, prohibiting the manufacture of pyro-

technics anywhere in the built-up parts of the city. By the mishap to which I refer, a soldier who had lost a leg in the service of his country, and three industrious lads, were killed, and a fire ensued that jeopardized the houses in the neighborhood, and produced considerable consternation among the residents. After the fire was extinguished, a small magazine was discovered a short distance in rear of the wrecked shop, which had in it more than one hundred weight of mealed powder, sulphur, nitre, carbon, and other dangerous chemicals, which were seized by the police.

I deem it to be my duty to again call attention to the want of a law, making it a penal offence to tamper with the signal boxes of the Fire Alarm Telegraph. Such an enactment, I am glad to hear, is likely to be passed by the present Legislature. Last year, quite a number of false alarms were caused by evil-disposed or mischievous parties opening and pulling the boxes. To turn out the whole fire department, at the midnight hour, upon a fool's errand, is rather a serious matter, although it may be fun to the prowling miscreant who perpetrates the joke.

Since my last annual report, the wires of the Police and Fire Alarm Telegraph have been extended to several distant points in the outskirts of the city, where alarm stations were greatly needed. Many new signal-boxes were placed on the different lines of wires, and desirable changes made in the location of a number of those previously erected. Wherever a judicious distribution admitted of it, they were put in the houses of fire companies or other buildings affording complete protection from the weather. A still further extension of the circuits of this invaluable adjunct of the fire department is necessary for the more effectual preservation of property in the rapidly growing suburbs. The localities where signal-boxes are now most wanted, are the following:—Southern Depot of the Fifth and Sixth Street Passenger Railway, Fifth and Morris streets, in the First Ward; Moyamensing Prison, Passyunk road and Dickerson street; Broad and Wharton streets; Eleventh and Washington streets; Twenty-first and Washington streets, in the Twenty-sixth Ward; Darby road and Fortieth street, in the Twenty-fourth Ward; Depot of the Tenth and Eleventh Street City Passenger Railroad Company, Tenth and Columbia streets, Twentieth Ward; Depot of the Second and Third Street Horse Car



Line, Frankford road and Somerset street, Nineteenth Ward.

Before closing this report, it is my duty to refer, in connection with the fires of the past year, to a matter which has been the subject of much complaint. I mean the injury to houses and goods by the unnecessary use of water. This mischief has grown to be a grave evil, and there are loud calls for its abatement. A very large percentage of the losses at many of the fires that are constantly occurring, is chargeable to this reckless mismanagement. Where underwriters have to make good all these damages, it is bad enough, but it is far worse, when, as is oftentimes the case, the losers are poor people who have no insurance.

I might enumerate scores of instances (for I see more or less of it at almost every fire,) of the folly and shame of wantonly deluging stores, flooding dwellings, converting stairways into foaming cascades and miniature cataracts, overflowing cellars, and swelling gutters to rivulets for the distance of squares, but I do not desire to say a word more than is requisite to arrest that attention which, it is hoped, may lead to reform.

The Fire Department of Philadelphia is an intelligent body of men, and they know, without my telling them, that this injudicious management at fires, is not only discreditable to the high character they have always maintained among their fellow-citizens, but is actually the greatest drawback to the efficiency and success of their noble calling. For it has been clearly demonstrated that, the greater the number of steamers in service at any one fire, the less execution will each apparatus do. The street mains, in the most favored localities, are incapable of affording the supply of water necessary for the effective working of more than a dozen steamers at one and the same time. Where a larger number are in full play, the insufficiency of the water supply is soon visible, and a diminution in the effectiveness of each machine, observable at a glance, particularly if there are two or more attachments, or a long line of forcing hose leading from it. Where high buildings are burning, some of the streams cannot reach further than the second or third stories, besides being deficient in volume and weak in force. What is worse still, when too many steamers are working, the flow of the aqueous element is sure to fail at the plugs nearest to the



scene of conflagration. There has been ocular demonstration of all this at fires so frequently, that no disinterested and impartial spectator could have failed to observe it.

Nowhere have the bad effects of this superabundance of steam power at fires, been more strikingly apparent than at the burning of the stearine candle works of Messrs. Grant & Co., in the Fifteenth Ward, last spring. Here, when the suction hose of a steamer drained a plug, and streams became powerless, the failure of the liquid was charged to a deficiency of the supply in the Fairmount basin, but it turned out that the water used on that occasion did not come from this reservoir at all, the Corinthian avenue basin supplying every drop, and both reservoirs being full!

When, in February, 1855, the experimental trial of the Miles Greenwood, the first steam fire-engine ever seen in our City, came off, in presence of the municipal authorities at Dock street wharf, and its excellent performance was saluted with groans, and the members of that old and respectable organization, the Philadelphia Hose Company, No. 1, under whose patronage the exhibition took place, were hooted at by their brother firemen, and narrowly escaped a shower of brickbats, for their marked intelligence and progressive spirit, who that witnessed the scenes of that well remembered day, could then have believed that, ere ten years had elapsed, the department, going fire-engine mad, would have in operation more than two score of steamers? Yet such a marvellous change has been realized. And more. The mania continues to rage. The doors of the Council Chambers are still besieged by associations, asking to be located either as steam fire-engine or steam forcing hose companies. When and where this thing is to stop, it confounds me to tell. Your Honor's veto has been interposed, but in vain. If we keep on adding to the steam power of the department, without check or limit, I am afraid that this great fire-extinguishing agency, the advent of which was so cordially hailed by our citizens, will itself defeat the very object of its creation, and instead of being any longer welcomed as a preserver, will be dreaded as a destroyer of property.

The Chief Engineer already finds himself embarrassed by this overgrowth of the steam arm of the department. The weapon is getting unwieldy, and difficult to control. This official is one of the oldest and most experienced firemen in

the city, and while it is a pleasure to me, it is but an act of simple justice on my part, to bear testimony to the activity, faithfulness, devotion and zeal exhibited by him in the discharge of the duties of his arduous position. But he directs a voluntary organization which elects its own head. Hence his task is delicate, and his path strewn with fewer roses than thorns. A volunteer fire department, whatever may be its advantages, and however proud its past record, is an irresponsible body. Perfect discipline in such an association, cannot be expected. Whether the system is any longer adapted to the wants of a great metropolis like Philadelphia, is a question which I had rather refrain from discussing in this report. The expression of my own opinion, I prefer to reserve for a future communication. There is now an effort being made in New York to change the volunteer system to a paid fire department. Our City Fathers, guided by public sentiment, will doubtless give to the subject such consideration as its importance demands.

Permit me to congratulate you upon the recent increase of the police. Councils never did a more opportune or judicious thing. The force was numerically too weak to afford efficient protection to the people in the suburbs. The new officers will be of great assistance to me in the prevention of incendiary fires. I hope that Philadelphia will in future continue to add to her municipal guard as her buildings extend and population expands. I hope, also, soon to see the Twenty-fifth and Twenty-sixth Wards, separate police districts.

My warmest thanks are due to the police and fire departments for their courteous and cordial co-operation with me on all occasions, in my efforts to ascertain the causes of fires and detect incendiaries. I am under special obligations to Lieutenant Witcraft of the Nineteenth Ward police, for valuable assistance rendered me in the important investigation of the great fire at Simons' factory.

Under the ordinance creating the office of Fire Marshal, it will be my duty hereafter to submit semi-annual reports to your Honor and Councils. These reports, it will be my aim to make interesting and valuable records of metropolitan fires.

Very respectfully,

Your ob't servant,

ALEXANDER W. BLACKBURN,

*Fire Marshal.*